CLAIMS

1/ A comb of optical carrier wave frequencies allocated respectively to N spectrum channels constituting an optical multiplex signal, said comb frequencies being spectrally spaced apart in irregular manner while all belonging to an optical frequency allocation chart that is spectrally spaced apart in regular manner at a pitch df, the comb being characterized in that said comb frequencies are selected in such a manner as to enable them to be dropped from said multiplex signal by N respective periodic optical filtering operations having the same free spectrum interval (Df) equal to M.df, where M is an integer equal to or greater than N, said filtering operations enabling N consecutive frequencies of the chart to be dropped, and in that the spacing between any pair of frequencies of said comb is different from any integer multiple greater than or equal to 1 of said free spectrum interval (Df).

2/ A comb according to claim 1, characterized in that the values of the spacing between pairs of frequencies of said comb are not all distinct.

3/ A comb according to claim 2, characterized in that the spacings between pairs of frequencies of said comb do not take on the same value more than 5N/9 times.

4/ A comb according to any one of claims 1 to 3, characterized in that M = N.

5/ An optical multiplex signal constituted by N spectrum channels allocated respectively to N optical carrier wave frequencies that are spectrally spaced apart in irregular manner while all belonging to a chart of optical frequencies that are spectrally spaced apart in regular manner at a pitch df, the signal being characterized in that said N optical carrier wave frequencies belong to a

comb whose frequencies are selected in such a manner as to enable them to be dropped from said multiplex signal by N respective periodic optical filtering operations having the same free spectrum interval (Df) equal to M.df, where M is an integer greater than or equal to N, said filtering operations enabling N consecutive frequencies of the chart to be dropped, and in that the spacing between any pair of frequencies of said comb is different from any integer multiple greater than or equal to 1 of said free spectrum interval (Df).

6/ A multiplex signal according to claim 5, characterized in that the spacing values between pairs of frequencies of said comb are not all distinct.

7/ A multiplex signal according to claim 6, characterized in that the spacings between pairs of frequencies of said comb do not take on the same value more than 5N/9 times.

8/ A multiplex signal according to any one of claims 5 to 7, characterized in that M = N.

9/ An optical transmission network using multiplexing by optical frequency distribution to convey at least one optical multiplex signal (WDM1, WDM2) constituted by N spectrum channels allocated respectively to N optical carrier wave frequencies, the network being characterized in that said N optical carrier wave frequencies belong to a comb according to any one of claims 1 to 4.

10/ An optical transmission network according to claim 9, characterized in that at least two of said multiplex signals (WDM1, WDM2) are associated respectively with at least two of said combs, said combs being mutually different.